

Zhenmeng Peng

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

95
papers

8,048
citations

42
h-index

89
g-index

101
ext. papers

9,004
ext. citations

10.1
avg, IF

6.38
L-index

#	Paper	IF	Citations
95	Non-thermal plasma-assisted rapid hydrogenolysis of polystyrene to high yield ethylene.. <i>Nature Communications</i> , 2022 , 13, 885	17.4	2
94	Ambient Synthesis of Pt-Reactive Metal Alloy and High-Entropy Alloy Nanocatalysts Utilizing Hydrogen Cold Plasma. <i>Chemistry of Materials</i> , 2022 , 34, 266-272	9.6	0
93	Balancing CO chemisorption with hydrogen electrochemical adsorption on Pt alloy catalyst for improving direct CO reduction to formaldehyde. <i>Chemical Engineering Journal</i> , 2022 , 446, 137131	14.7	
92	An Electrochemical Ethylamine/Acetonitrile Redox Method for Ambient Hydrogen Storage. <i>ACS Applied Materials & Interfaces</i> , 2021 , 13, 55292-55298	9.5	0
91	Approaching full-range selectivity control in CO ₂ hydrogenation to methanol and carbon monoxide with catalyst composition regulation. <i>Inorganic Chemistry Frontiers</i> , 2021 , 8, 2433-2441	6.8	1
90	Non-thermal plasma-assisted hydrogenolysis of polyethylene to light hydrocarbons. <i>Catalysis Communications</i> , 2021 , 150, 106274	3.2	14
89	Fingerprinting the Ammonia Synthesis Pathway Using Spatiotemporal Electrostatic Potential Distribution of Intermediates. <i>ACS Omega</i> , 2021 , 6, 6292-6296	3.9	0
88	Designing Champion Nanostructures of Tungsten Dichalcogenides for Electrocatalytic Hydrogen Evolution. <i>Advanced Materials</i> , 2020 , 32, e2002584	24	48
87	Unravelling Proximity-Driven Synergetic Effect within CIZOBAPO Bifunctional Catalyst for CO ₂ Hydrogenation to DME. <i>Energy & Fuels</i> , 2020 , 34, 8635-8643	4.1	16
86	Properties of amorphous iron phosphate in pseudocapacitive sodium ion removal for water desalination.. <i>RSC Advances</i> , 2020 , 10, 16875-16880	3.7	3
85	Utilizing hydrogen underpotential deposition in CO reduction for highly selective formaldehyde production under ambient conditions. <i>Green Chemistry</i> , 2020 , 22, 5639-5647	10	5
84	Oscillation of Work Function during Reducible Metal Oxide Catalysis and Correlation with the Activity Property. <i>ChemCatChem</i> , 2020 , 12, 85-89	5.2	1
83	A vacuum impregnation method for synthesizing octahedral PtCuNi nanoparticles on mesoporous carbon support and the oxygen reduction reaction electrocatalytic properties. <i>Journal of Colloid and Interface Science</i> , 2020 , 564, 245-253	9.3	8
82	Two-Dimensional Metal Organic Framework Nanosheets as Bifunctional Catalyst for Electrochemical and Photoelectrochemical Water Oxidation. <i>Frontiers in Chemistry</i> , 2020 , 8, 604239	5	4
81	Platinum Alloy Catalysts for Oxygen Reduction Reaction: Advances, Challenges and Perspectives. <i>ChemNanoMat</i> , 2020 , 6, 32-41	3.5	38
80	Unconventional p-d Hybridization Interaction in PtGa Ultrathin Nanowires Boosts Oxygen Reduction Electrocatalysis. <i>Journal of the American Chemical Society</i> , 2019 , 141, 18083-18090	16.4	107
79	Proximity to Graphene Dramatically Alters Polymer Dynamics. <i>Macromolecules</i> , 2019 , 52, 5074-5085	5.5	8

78	Designing Highly Efficient and Long-Term Durable Electrocatalyst for Oxygen Evolution by Coupling B and P into Amorphous Porous NiFe-Based Material. <i>Small</i> , 2019 , 15, e1901020	11	36
77	Dual-Site Cascade Oxygen Reduction Mechanism on SnO /Pt-Cu-Ni for Promoting Reaction Kinetics. <i>Journal of the American Chemical Society</i> , 2019 , 141, 9463-9467	16.4	37
76	Porous amorphous NiFeOx/NiFeP framework with dual electrocatalytic functions for water electrolysis. <i>Journal of Power Sources</i> , 2019 , 428, 76-81	8.9	19
75	Synergy between active sites of Cu-In-Zr-O catalyst in CO ₂ hydrogenation to methanol. <i>Journal of Catalysis</i> , 2019 , 372, 74-85	7.3	54
74	Distribution and Valence State of Ru Species on CeO ₂ Supports: Support Shape Effect and Its Influence on CO Oxidation. <i>ACS Catalysis</i> , 2019 , 9, 11088-11103	13.1	67
73	Tuning Electronic Structure and Lattice Diffusion Barrier of Ternary Pt _{1-x-y} Ir _x Ni _y for Both Improved Activity and Stability Properties in Oxygen Reduction Electrocatalysis. <i>ACS Catalysis</i> , 2019 , 9, 11431-11437	12.1	21
72	Oxidation-Induced Atom Diffusion and Surface Restructuring in Faceted Ternary Pt _{1-x-y} Cu _x Ni _y Nanoparticles. <i>Chemistry of Materials</i> , 2019 , 31, 1720-1728	9.6	21
71	Low-dimensional materials for alkaline oxygen evolution electrocatalysis. <i>Materials Today Chemistry</i> , 2019 , 11, 119-132	6.2	13
70	Competitive Transient Electrostatic Adsorption for In Situ Regeneration of Poisoned Catalyst. <i>ChemCatChem</i> , 2019 , 11, 1179-1184	5.2	0
69	Synthesis of freestanding amorphous giant carbon tubes with outstanding oil sorption and water oxidation properties. <i>Journal of Materials Chemistry A</i> , 2018 , 6, 3996-4002	13	17
68	High-Performance Transition Metal Phosphide Alloy Catalyst for Oxygen Evolution Reaction. <i>ACS Nano</i> , 2018 , 12, 158-167	16.7	231
67	Deconvolution of octahedral PtNi nanoparticle growth pathway from in situ characterizations. <i>Nature Communications</i> , 2018 , 9, 4485	17.4	25
66	Active Sites in Heterogeneous Catalytic Reaction on Metal and Metal Oxide: Theory and Practice. <i>Catalysts</i> , 2018 , 8, 478	4	33
65	Computation-Guided Development of Platinum Alloy Catalyst for Carbon Monoxide Preferential Oxidation. <i>ACS Catalysis</i> , 2018 , 8, 5777-5786	13.1	17
64	A review of Pt-based electrocatalysts for oxygen reduction reaction. <i>Frontiers in Energy</i> , 2017 , 11, 268-285	8.6	110
63	In Situ Atomic-Scale Observation of the Two-Dimensional Co(OH) ₂ Transition at Atmospheric Pressure. <i>Chemistry of Materials</i> , 2017 , 29, 4572-4579	9.6	17
62	Engineering the Electrical Conductivity of Lamellar Silver-Doped Cobalt(II) Selenide Nanobelts for Enhanced Oxygen Evolution. <i>Angewandte Chemie</i> , 2017 , 129, 334-338	3.6	27
61	Engineering the Electrical Conductivity of Lamellar Silver-Doped Cobalt(II) Selenide Nanobelts for Enhanced Oxygen Evolution. <i>Angewandte Chemie - International Edition</i> , 2017 , 56, 328-332	16.4	141

60	Free-Standing Holey Ni(OH) Nanosheets with Enhanced Activity for Water Oxidation. <i>Small</i> , 2017 , 13, 1700334	11	75
59	Achieving Remarkable Activity and Durability toward Oxygen Reduction Reaction Based on Ultrathin Rh-Doped Pt Nanowires. <i>Journal of the American Chemical Society</i> , 2017 , 139, 8152-8159	16.4	210
58	More accurate depiction of adsorption energy on transition metals using work function as one additional descriptor. <i>Physical Chemistry Chemical Physics</i> , 2017 , 19, 12628-12632	3.6	28
57	Elemental two-dimensional nanosheets beyond graphene. <i>Chemical Society Reviews</i> , 2017 , 46, 2127-2153	38.5	220
56	Gold atom-decorated CoSe ₂ nanobelts with engineered active sites for enhanced oxygen evolution. <i>Journal of Materials Chemistry A</i> , 2017 , 5, 20202-20207	13	42
55	Phase engineering of cobalt hydroxides using magnetic fields for enhanced supercapacitor performance. <i>Journal of Materials Chemistry A</i> , 2017 , 5, 19203-19209	13	23
54	A nitrogen-doped ordered mesoporous carbon/graphene framework as bifunctional electrocatalyst for oxygen reduction and evolution reactions. <i>Nano Energy</i> , 2016 , 30, 503-510	17.1	119
53	Free-Standing Two-Dimensional Ru Nanosheets with High Activity toward Water Splitting. <i>ACS Catalysis</i> , 2016 , 6, 1487-1492	13.1	217
52	A Generic Wet Impregnation Method for Preparing Substrate-Supported Platinum Group Metal and Alloy Nanoparticles with Controlled Particle Morphology. <i>Nano Letters</i> , 2016 , 16, 164-9	11.5	38
51	Growth of encapsulating carbon on supported Pt nanoparticles studied by in situ TEM. <i>Journal of Catalysis</i> , 2016 , 338, 295-304	7.3	33
50	Low-Temperature Preferential Oxidation of Carbon Monoxide on Pt ₃ Ni Alloy Nanoparticle Catalyst with Engineered Surface. <i>ChemCatChem</i> , 2016 , 8, 97-101	5.2	15
49	Low-Temperature Preferential Oxidation of Carbon Monoxide on Pt ₃ Ni Alloy Nanoparticle Catalyst with Engineered Surface. <i>ChemCatChem</i> , 2016 , 8, 3-3	5.2	1
48	Hydrogen Production via Hydrazine Decomposition on Model Platinum-Nickel Nanocatalyst with a Single (111) Facet. <i>Journal of Physical Chemistry C</i> , 2016 , 120, 9764-9772	3.8	35
47	Synthesis and property of a Helwingia-structured nickel nitride/ nickel hydroxide nanocatalyst in hydrazine decomposition. <i>RSC Advances</i> , 2016 , 6, 38494-38498	3.7	6
46	Engineering active sites of two-dimensional MoS ₂ nanosheets for improving hydrogen evolution. <i>Inorganic Chemistry Frontiers</i> , 2016 , 3, 1376-1380	6.8	21
45	Metallic nickel nitride nanosheets realizing enhanced electrochemical water oxidation. <i>Journal of the American Chemical Society</i> , 2015 , 137, 4119-25	16.4	844
44	Octahedral Pt ₂ CuNi Uniform Alloy Nanoparticle Catalyst with High Activity and Promising Stability for Oxygen Reduction Reaction. <i>ACS Catalysis</i> , 2015 , 5, 2296-2300	13.1	99
43	Metallic Nanostructures for Electrocatalysis 2015 , 205-241		

42	Engineering the electronic state of a perovskite electrocatalyst for synergistically enhanced oxygen evolution reaction. <i>Advanced Materials</i> , 2015 , 27, 5989-94	24	187
41	Octahedral Pd@Pt _{1.8} Ni core-shell nanocrystals with ultrathin PtNi alloy shells as active catalysts for oxygen reduction reaction. <i>Journal of the American Chemical Society</i> , 2015 , 137, 2804-7	16.4	273
40	Effects of composition and metal particle size on ethane dehydrogenation over Pt _x Sn _{100-x} /Mg(Al)O (70?x?100). <i>Journal of Catalysis</i> , 2014 , 311, 161-168	7.3	83
39	n-Butane dehydrogenation over Pt/Mg(In)(Al)O. <i>Applied Catalysis A: General</i> , 2014 , 470, 208-214	5.1	34
38	Property of PtAg Alloy Nanoparticle Catalysts in Carbon Monoxide Oxidation. <i>Journal of Physical Chemistry C</i> , 2014 , 118, 28739-28745	3.8	24
37	Carbon monoxide in controlling the surface formation of Group VIII metal nanoparticles. <i>Chemical Communications</i> , 2014 , 50, 14013-6	5.8	15
36	Structural and energetic insight into the cross-seeding amyloid assemblies of human IAPP and rat IAPP. <i>Journal of Physical Chemistry B</i> , 2014 , 118, 7026-36	3.4	29
35	Size-dependent oxygen reduction property of octahedral PtNi nanoparticle electrocatalysts. <i>Journal of Materials Chemistry A</i> , 2014 , 2, 19778-19787	13	52
34	Solid-state chemistry-enabled scalable production of octahedral Pt-Ni alloy electrocatalyst for oxygen reduction reaction. <i>Journal of the American Chemical Society</i> , 2014 , 136, 7805-8	16.4	189
33	Shape-enhanced ammonia electro-oxidation property of a cubic platinum nanocrystal catalyst prepared by surfactant-free synthesis. <i>Journal of Materials Chemistry A</i> , 2013 , 1, 14402	13	31
32	High-resolution in situ and ex situ TEM studies on graphene formation and growth on Pt nanoparticles. <i>Journal of Catalysis</i> , 2012 , 286, 22-29	7.3	85
31	Surfactant-free preparation of supported cubic platinum nanoparticles. <i>Chemical Communications</i> , 2012 , 48, 1854-6	5.8	43
30	Size and composition control of Pt-In nanoparticles prepared by seed-mediated growth using bimetallic seeds. <i>Langmuir</i> , 2012 , 28, 3345-9	4	12
29	Effects of surface chemistry on the generation of reactive oxygen species by copper nanoparticles. <i>ACS Nano</i> , 2012 , 6, 2157-64	16.7	116
28	Effects of the Synthesis Parameters on the Size and Composition of PtSn Nanoparticles Prepared by the Polyalcohol Reduction Method. <i>Journal of Physical Chemistry C</i> , 2011 , 115, 19084-19090	3.8	26
27	Lattice contracted AgPt nanoparticles. <i>Chemical Communications</i> , 2011 , 47, 12595-7	5.8	25
26	Truncated octahedral Pt(3)Ni oxygen reduction reaction electrocatalysts. <i>Journal of the American Chemical Society</i> , 2010 , 132, 4984-5	16.4	459
25	Synthesis and Oxygen Reduction Electrocatalytic Property of Platinum Hollow and Platinum-on-Silver Nanoparticles. <i>Chemistry of Materials</i> , 2010 , 22, 1098-1106	9.6	138

24	Composition-dependent formation of platinum silver nanowires. <i>ACS Nano</i> , 2010 , 4, 1501-10	16.7	126
23	Electrochemical synthesis and catalytic property of sub-10 nm platinum cubic nanoboxes. <i>Nano Letters</i> , 2010 , 10, 1492-6	11.5	123
22	Supportless oxygen reduction electrocatalysts of CoCuPt hollow nanoparticles. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2010 , 368, 4261-74	3	10
21	An Electrochemical Approach to PtAg Alloy Nanostructures Rich in Pt at the Surface. <i>Advanced Functional Materials</i> , 2010 , 20, 3734-3741	15.6	99
20	Noble-Metal Nanotubes Prepared via a Galvanic Replacement Reaction Between Cu Nanowires and Aqueous H ₂ AuCl ₄ , H ₂ PtCl ₆ , or Na ₂ PdCl ₄ . <i>Science of Advanced Materials</i> , 2010 , 2, 413-420	2.3	44
19	PtAu bimetallic heteronanostructures made by post-synthesis modification of Pt-on-Au nanoparticles. <i>Nano Research</i> , 2009 , 2, 406-415	10	120
18	Designer platinum nanoparticles: Control of shape, composition in alloy, nanostructure and electrocatalytic property. <i>Nano Today</i> , 2009 , 4, 143-164	17.9	925
17	Synthesis and oxygen reduction electrocatalytic property of Pt-on-Pd bimetallic heteronanostructures. <i>Journal of the American Chemical Society</i> , 2009 , 131, 7542-3	16.4	565
16	Synthesis and application of RuSe ₂ + β -nanotubes as a methanol tolerant electrocatalyst for the oxygen reduction reaction. <i>Journal of Materials Chemistry</i> , 2009 , 19, 1024-1030		20
15	Direct Oxidation of Methanol on Pt Nanostructures Supported on Electrospun Nanofibers of Anatase. <i>Journal of Physical Chemistry C</i> , 2008 , 112, 9970-9975	3.8	92
14	Electrocatalytic properties of Pt nanowires supported on Pt and W gauzes. <i>ACS Nano</i> , 2008 , 2, 2167-73	16.7	104
13	Platinum Lead Nanostructures: Formation, Phase Behavior, and Electrocatalytic Properties. <i>Advanced Functional Materials</i> , 2008 , 18, 2745-2753	15.6	43
12	AgPt alloy nanoparticles with the compositions in the miscibility gap. <i>Journal of Solid State Chemistry</i> , 2008 , 181, 1546-1551	3.3	76
11	Growing Pt nanowires as a densely packed array on metal gauze. <i>Journal of the American Chemical Society</i> , 2007 , 129, 10634-5	16.4	168
10	Synthesis and characterization of ordered intermetallic PtPb nanorods. <i>Journal of the American Chemical Society</i> , 2007 , 129, 8684-5	16.4	146
9	Synthesis of Magnetite Nanorods through Reduction of β -FeOOH. <i>Chemistry Letters</i> , 2005 , 34, 636-637	1.7	30
8	The enhanced coercivity for the magnetite/silica nanocomposite at room temperature. <i>Materials Research Bulletin</i> , 2004 , 39, 1875-1880	5.1	12
7	Synthesis and magnetic properties of Zn _{1-x} MnxFe ₂ O ₄ nanoparticles. <i>Physica B: Condensed Matter</i> , 2004 , 349, 124-128	2.8	74

6	Synthesis and Magnetic Properties of Single-Crystals of MnFe ₂ O ₄ Nanorods. <i>European Journal of Inorganic Chemistry</i> , 2004 , 2004, 1165-1168	2.3	60
5	Magnetic Field-induced Increasing of the Reaction Rates Controlled by the Diffusion of Paramagnetic Gases. <i>Chemical Engineering and Technology</i> , 2004 , 27, 1273-1276	2	9
4	Growth of magnetite nanorods along its easy-magnetization axis of [110]. <i>Journal of Crystal Growth</i> , 2004 , 263, 616-619	1.6	69
3	Disappearing of the Verwey transition in magnetite nanoparticles synthesized under a magnetic field: implications for the origin of charge ordering. <i>Chemical Physics Letters</i> , 2004 , 390, 55-58	2.5	33
2	Hydrothermal Synthesis and Characterization of Bi ₂ Fe ₄ O ₉ Nanoparticles. <i>Chemistry Letters</i> , 2004 , 33, 502-503	1.7	50
1	Nitrogen-inserted nickel nanosheets with controlled orbital hybridization and strain fields for boosted hydrogen oxidation in alkaline electrolytes. <i>Energy and Environmental Science</i> ,	35.4	4